Requirements in Electrical Installation and Maintenance Works for Employability of Technical College Graduates in Akwa Ibom State

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Abstract

The study investigated the industrial requirements in electrical installation and maintenance works (EIMWs) for employability of technical college graduates (ETCG) in Akwa Ibom State. To achieved the aims of the study, research purpose was formed, question raised with corresponding hypothesis. The research design adopted was descriptive survey research design. The population of the study comprised all the 991 Senior Technical III Students in Electrical Installation and Maintenance Works Trade in the Nine Akwa Ibom State-owned Technical Colleges (TCs). Sample of 346 were used in the study consisting of ST III Students from TCs. Data collected using researcher's designed instrument entitled "Electrical Installation and Maintenance Works Technical Scale" (EIMWETS). The EIMWETS was validated and tested for reliability which the estimates 0.78 and 0.791 for Part 2 and 0.79 for Part 3 of the instrument respectively. Data analysis was done using simple linear regression R^2 and the F value for the research question raised and testing the formulated hypothesis. The results of the analysis revealed that EWSSA and WEMSA predicts ETCG was very high. CJSSA and FDSA was high. The results also show that IEMSA and IWDSA was low. Meanwhile, the extent of prediction of graduates' employability by the students' competence with tools, fault rectification skills, and the installation of electrical equipment skill was very low. However, the extent to which all the independent sub-variables predict the employability of the technical college graduates were significant. In essence, it is concluded that the extent of graduates' employability depends on the states of adequacy in the availability of required equipment and facilities for technical study and learning. Arising from this backdrop, it is recommended among others that Akwa Ibom State Government and corporate organisations/individuals should provide the technical colleges with adequate and functional facilities (electrical installation and maintenance work equipment and facilities) to assist in creating platforms for students' practical experience and enhancing their employability on the trade.

Keywords: Electrical Installation, Maintenance Work, Technical College, Skills, Employability

Issues of unemployment in the world still constitute remarkably to the socioeconomic anomalies in the 21st century society (Ede, Ndubisi, & Nwankwo, 2013, Nwankwo, and Ifejiofor, 2014). In terms of continental figure, Africa contribute almost 10.6 percent of unemployment rate globally (Donkor, 2021), with Nigeria having a share of 22.6 percent (Global Financial Report**,** 2024). Unfortunate, Akwa Ibom State resumed the second ranking in the comity of States with highest unemployment rate after Rivers State (National Bureau of Statistics, 2022, Ita and Bassey, 2022, Trade Economic Report, 2023) in Nigeria. This unfortunate scenario exists in spite the numerous obligations and advantages of vocational and technical skills demanded by the rising population of humans in Nigeria. A situation that originally informed the establishment of technical colleges.

Technical colleges (TCs) were established in Nigeria to fill the gap of lack of skilled personnel and unemployment. Caleb and Udofia (2023) emphasized that TCs were established to prepare it graduates with skills that go beyond taking immediate employment, but with skills that enhances the employability of its graduates so that they can adapt to different jobs throughout their lifetime as well as equip its recipients with both technical and soft skills that allow flexibility and the ability to work across a wide range of work. Put differently, it geared towards training technically oriented personnel and technicians who are to be initiators, facilitators, and implementers of technological development of Nigeria (Okoye *et al*., 2016, Federal Government of Nigeria, 2018, (Ogbuanya *et al.,* 2016, Okoli, *et al*., 2018, Osuji, *et al*., 2021). In Akwa Ibom State, the government, understanding the essentialities of technical education establishment in vocational and technical skill development create several TCs to imprints these skills empowerment on the learners. However, close observation projects unattainable situation that depict the fact that this vision of the government is far from being achieved. This is evidence in students' poor academic performance in TCs (Worlu & Puyate, 2023), (Martins *et al.,* 2023), outright dependence on government for employment (Albertini, et.al., 2021), poor job performance of technical staff employed by government and private organization (Owota & Ellio, 2022), companies' dependence on foreign expatiates for effective job delivery (Cocuľová & Tomčíková, 2019), worst still, rising level of unemployment rate (Rufus, Edward and Abel, 2022). Thus, this informed the contemplation as to whether technical education really contribute any tangible benefits to its core obligation which is learners' employability.

The concept of employability without exaggeration is pivotal in the 21st century societal development and sustainability. Many scholars defined employability (Bennett *et al*., 2020, Audu, *et al*., 2013, Shafia & Nayan, 2010, Munro, 2017), but emphasis of this study is on Pool and Sewell in Mahajan and Golahit (2017) definition which considers it as having a set of skills, knowledge, and understanding and personal attributes that makes a person more likely to choose and secure occupations in which they can be satisfied and successful. These skills include students–related skills: such as communication, interpersonal, teamwork, problem-solving, planning and organizing, learning-to-learn skills, thinking innovatively, and creatively, being able to manage one's own time, having self-esteem, business skills: such as innovation skills, enterprise skills community skills: such as civic or citizenship knowledge

and skills (Gibb in Mahajan *et al., 2017).* All these skills are embedded in the curriculum strength of TCs though seems not achievable. This is even more worrisome as the aspect of electrical development in Nigeria is still found wanting in areas of professionalism, professionalization, manpower strength, and ineffectiveness and inefficiency beclouding the sector.

The technical education revolves around diverse trades skills set (Haviland and Robbins, 2021). One of such areas is electrical installation and maintenance work (EIMW). Dissecting EIMW by disjointed meaning, Electrical Installation Inspection Act (2004) considers electrical installation (EI) as fixing an equipment, device, appliances or structure in position for use. meanwhile, maintenance works implies specific steps and precautions taken for the care of equipment, machinery or facility which will ensure that such an item attains its optimal functional utility and lifespan (Ogbuanya *et al*., 2013). Adjoining the two concepts, EIMW is dependent on specific skills acquired by the workers.

The skills embedded in EIMW as part of the trades in the curriculum are power generation, transmission and distribution, measurement, instrumentation, drafting and interpretation, and wiring (Osuyi *et al*., 2021). Meanwhile, these skills were regrouped into cable joint and soldering, battery charging and maintenance, machine rewinding and installation, fault detection and rectification, installation of electrical machines, competence with tools, interpretation and wiring diagram (National Board of Technical Education, 2018). These skills according to Abiona and Akinwumi (2016) have the potencies of creating employment opportunities, enhancing self-reliance, promoting socio-cognitive tranquility in the society, improving employees' job performance, as well as organizational effectiveness and efficiency. Whether this is actually the case of TCs in Akwa Ibom State is a concern for investigation.

Installation of electrical machines and equipment according to Onah *et al*. (2022) requires skills in planning for layout and wiring, testing for safety, compliance with statutory/safety regulations, and forecasting of spare parts among others. The authors maintained that acquisition of these skills assists individuals in creating employment opportunity. However, Ehijele and Solomon (2021) pointed out that these skills is lacking as the assessment of work place performance of graduates of vocational and technical education in Bayelsa State was poor. This is contradicted by Onoh *et al*. (2022) results which indicated that TCs graduate skills for job creation and self-reliance in Enugu State was high. Issues of moderate availability of equipment, tools and measuring instruments were considered as variables for the disparity (Makinde, 2016).

The case of winding of electrical machines (WEM) as another skill in EIMW that deals with various machines employed in industries, power stations, domestic and commercial appliance (Terrel and Amadi cited in Osuji *et al*., 2021). This equipped the trainees with the knowledge and skills that enable them wind and rewind AC and DC rotating/static machines up to 10KVA. Authors such as Abdul *et al* (2020) and Moses (2017) highlighted skills in this

perspective into ability to follow regulation on the use of tools, understanding winding tools, draw procedures for wave winding, apply lap winding and identify front and back shields. Moses (2017) in his study revealed a high level of graduates' job performance in three WEM skills (tools and equipment, dismantling and rewinding of machines).

Interpretation of wiring drawing (IWD) requirements for employability of TCs graduates provides information about the relative positioning and arrangement of devices and terminals on the device (Rongey, 2013, Ohikhware, 2019). These according to authors requires knowledge of circuit diagram, graphics, alphabetic and numeric symbols, basic circuit practices and basic understanding of the relevant process requirement. Amadi *et al*. (2022) maintained that students in Bayelsa State colleges have high extent skills in the IWD. A position that contradicted Ehijele, *et al.* (2021) and Makinde (2016) findings of poor job performance of IWD graduates. In the aspect of cable joint and soldering skills (CJSS) which according to Osuji *et al*., (2021), plays a vital role in providing dependable electrical connection, mechanical support and physical safeguarding of cables, it was found that graduates in TCs in North Eastern Nigeria moderately acquired skills in the installation of MICC cable and slightly low skills in the installation of ducks and trunking task (Moses, 2017).

Fault detection (FD) and fault rectification skills (FRS) are two EIMW trade skills that are equally essential in guaranteeing graduates' employability (Makinde, 2016). However, the EIMW graduates were found to exhibit low level of job performance in this direction (Moses, 2017). Adducing from the results of studies done in different locations in Nigeria which revealed contradictory positions with relatively poor level of achievement in graduates' employability, one may argue that issue of Akwa Ibom State may differ due to the importance given to education in the State. Whether this importance really translate to TCs graduates acquiring functional EIMW trade skills essential for their employability remains cardinal for investigation.

Purpose of the Study

The main purpose of the study was to investigate the industrial requirements in electrical installation and maintenance works (EIMWs) for employability of technical college graduates in Akwa Ibom State. Specifically, the study sought to:

i. Determine the extent to which electrical work safety skills acquired (EWSSA),
ii. Installation of electrical machine skills acquired (IEMSA),
iii. Winding of electrical machines skill acquired (WEMSA),
iv. Competence with tools acquired (COTSA),
v. Interpretation of wiring diagram skills acquired (IWDSA),
vi. Cable joint/soldering skills acquired (CJSSA),
vii. Fault detection skill acquired (FDSA), and
viii. Fault rectification skill acquired (IEESA) predicts employability of technical college graduates (ETCG).

Research Questions

The research question raised for the study was:

What is the extent to which EWSSA, IEMSA, WEMSA, COTSA, IWDSA, CJSSA, FDSA, and IEESA predicts ETCG?

Null Hypothesis

The hypothesis formulated was stated as follows:

The extent to which EWSSA, IEMSA, WEMSA, COTSA, IWDSA, CJSSA, FDSA, and IEESA predicts ETCG is not significant.

Methodology

The study was conducted in Akwa Ibom State. The State is one of the 36 States of Nigeria located in the South-South geopolitical zone of Nigeria, between latitudes 4^0 32^N and 5^0 33^N and longitudes 7^0 25^E and 8^0 25^E. Akwa Ibom State has nine technical colleges and three federal government technical colleges. Emphasis of this study is based on the State's owned technical colleges which offered Electrical installations and maintenance works as a subject of electrical/electronic trade.

Descriptive survey research design was adopted. According to Effiong (2022), descriptive research design describes and generalize the finding of the study as it occurs without any alteration or influence by the researcher. The population of the study comprised all the 991 Senior Technical III Students in electrical installation and maintenance works trade in the nine Akwa Ibom owned technical colleges (Source: School Technical Education Board, Akwa Ibom State, 2023). The sample of the study was 316 ST III Students of Technical College derived using multistage approach combining proportionate sampling and simple random sampling technique. The choice of the students for the study was premised on the fact that the viability of the students in handling the practical exercises on the trade (electrical installations and maintenance works) in schools to a very high extent determines their employability in any industry. Also, since there was no organized or coordinated data as to where these technical colleges graduates are working, it would have been very difficult to track them in the macro society. Hence, this promoted the adoption of the students as the respondents in this study.

A researcher's designed instrument entitled "Electrical Installation and Maintenance Works Technical Scale" (EIMWETS) elicited information from the respondents and as such, have two parts. Part 1 eliciting information on the name of the college, respondents name, gender, and the respondent's level of satisfaction on the trade. Part 2 consisted of nine clusters representing nine independent sub-variables (testing of electrical work for safety requirements, installation of electrical machine, installation of electrical equipment, winding of electrical machines, competence with tools, interpretation of wiring drawing, cable joint/ soldering, fault detection, and rectification). These clusters had 35 items designed on a declarative statement

of four points scale of Very High Extent (VHE), High Extent (HE), Low Extent (LE) and Very Low Extent (VLE) to elicit information on the extent of the respondents meeting the industrial requirements in these nine areas of electrical installation and maintenance works in Technical Colleges. Each of the clusters had five items. The scale was coded in positive perspective in descending order: VHE, 4, HE, 3, LE, 2 and VLE, 1. The coding was similar with that of Part 3 of the instrument designed on 10 items that elicited information from the respondents on their employability. The instrument was validated and tested for reliability at 0.78 for Part 2 and 0.79 for Part 3 using Cronbach alpha statistical tool (r). Instant retrieval approach was utilized for the instrument administration, and valid return rate of 97.7 was recorded, implying 338.

Simple linear regression was used to answer the research questions raised as well as in testing the formulated null hypotheses at .05 level of significance. To answer the research questions, simple linear regression coefficient R^2 was used, while the F value of simple linear regression statistics was used to test the null hypotheses at 0.05 level of significant.

Results

Research Question: What is the extent to which EWSSA, IEMSA, WEMSA, COTSA, IWDSA, CJSSA, FDSA, and IEESA predicts ETCG?

Table 1: Simple Linear Regression Analysis of EWSSA, IEMS, WEMS, COTS, IWDS, CJSS, FDS, FRS, IEES predicts employability of technical college graduates (ETCG) (N=338)

Variables	R	R^2	Extent of Prediction	Remarks
EWSSA	0.943	0.890	89%	VHE
IEMSA	0.512	0.262	26.2%	LE
WEMSA	0.920	0.846	84.6%	VHE
COTSA	0.505	0.255	25.5%	LE
IWDSA	0.491	0.266	26.6%	LE
CJSSA	0.677	0.541	54.1%	HE
FDSA	0.701	0.634	63.4%	HE
FRSA	0.201	0.219	22%	VLE
IEESA	0.217	0.225	23%	VLE

(Source: Field Survey, 2023)

Table 1 shows the R for the strength of the relationship and R^2 for the determination of the extent of prediction of employability of technical college graduates by EWSSA, IEMSA, WEMSA, COTSA, IWDSA, CJSSA, FDSA, and IEESA. The R-value of 0.943, 0.512, 0.920, 0.505, 0.491, 0.677, 0., 701, 0.201, and 0.217 reveals the extent to which the prediction occurs. The calculated R^2 of 0.890, 0.262, 0.846, 0.255, 0.266, 0.541, 0.634, 0.219, and 0.225 which is the coefficient of determination implying the percent variabilities in employability of technical college graduates is predicted by EWSSA, IEMSA, WEMSA, COTSA, IWDSA, CJSSA, FDSA, and IEESA. This result implies that EWSSA, IEMSA, WEMSA, COTSA, IWDSA, CJSSA, FDSA, and IEESA contributes (89%), (26.2%), (84.6%), (25.5%), (26.6%), (54.1%), (63.4%), (22%), and (23%) to predict employability of technical college graduates in Akwa Ibom. The indication is that the extent to which EWSSA, IEMSA, WEMSA, COTSA,

IWDSA, CJSSA, FDSA, and IEESA predicts ETCG in Akwa Ibom State are VHE, LE, VHE, LE, LE, HE, HE, VLE, and VLE respectively.

Null Hypothesis: The extent to which EWSSA, IEMSA, WEMSA, COTSA, IWDSA, CJSSA, FDSA, and IEESA predicts ETCG is not significant.

Table 2: Simple Linear Regression Analysis of the extent EWSSA, IEMSA, WEMSA, COTSA, IWDSA, CJSSA, FDSA, FRSA, IEESA predicts ETCG (N=338)

Variables	F-cal	F-crit.	Decision @ p<.05
EWSSA	699.80*	3.86	Rejected
IEMSA	304.44*	3.86	Rejected
WEMSA	475.3*	3.86	Rejected
COTSA	292.9*	3.86	Rejected
IWDSA	237.70*	3.86	Rejected
CJSSA	512.9*	3.86	Rejected
FDSA	244.9*	3.86	Rejected
FRSA	311.5*	3.86	Rejected
IEESA	372.1*	3.86	Rejected

(Sourced: Field Analysed Data, 2023)

The result in Table 2 indicates that the calculated F-values that are greater than the critical F-value of 3.86 at 0.05 levels of significant with 1 and 337 degrees of freedom in all the independent sub-variables (EWSSA, IEMSA, WEMSA, COTSA, IWDSA, CJSSA, FDSA, FRSA, IEESA). These are indications that the extent of predictions is significant. Therefore, the null hypothesis which states that the extent to which EWSSA, IEMSA, WEMSA, COTSA, IWDSA, CJSSA, FDSA, FRSA, IEESA predicts ETCG is not significant is rejected. This therefore implies that the extent to which EWSSA, IEMSA, WEMSA, COTSA, IWDSA, CJSSA, FDSA, FRSA, IEESA predicts ETCG is significant.

Discussion of Findings

From the findings, the extent to which EWSSA predicts ETCG was very high and significant. In others words, graduates of technical colleges in Akwa Ibom State were employable to a high extent due to their acquired skills in the electrical work safety skill acquired. The high level of EWSS contribution to the employability of the graduates might not be unconnected with the theoretical perspective that mostly characterized this aspect of the trade and the availability of the reading materials that are well expatiating for studies. The findings aligned with that of Okoye *et.al*. (2021), that concluded that the extent of safety skills of the students was high, though there was need for students to develop the identified safety practice skills in using electrical hand tools, operating electrical equipment/machines, and then apply them while working in the workshops and after graduation.

Also, the extent to which IEMSA predicts ETCG was low though significant. The low extent contribution of IEMSA to the ETCGs in Akwa Ibom State could be due to the

inadequacy of the electrical machines available for the teaching of students the basic embedded values and practical patterns in the utilization of the skill. Despite this position, the contribution of this aspect of the trade is still essential in promoting their employability. The finding of this study corroborates the study done by Ehijele and Solomon (2021) in Bayelsa State, though contrary to that of Onoh *et al.,* (2022) in Enugu State, which revealed high co-efficient result of 0.78 on average. The disparity as promoted by Makinde (2016), is resulted from the fact that equipment, tools and measuring instruments were moderately available in technical colleges in Nigeria**.**

The extent to which WEMSA predicts ETCG is very high and significant. This may be because the students had accessed to the machines which were not ordinarily functional but were useful for the winding practical teaching and learning. The winding of the electrical machine aspect of electrical installation and maintenance work skills has valuable orientations that can drastically promote self-development and self-reliance which are core values of employability in the trade. The finding of the study is supported by Moses (2017) study in north eastern Nigeria which indicated that graduate of EIMW of technical colleges highly acquired skills in winding of electrical machines. These were majorly in three task clusters namely, tools and equipment, dismantling and rewinding of machines.

The extent to which COTSA predicts ETCG was very low though significant. The implication is that although graduates of technical colleges in Akwa Ibom State were not really competence with tools essentials for the acquisition of the valuable skills in EIMW, the extent of COT acquired were essential in the enhancement of their employability status. The very low extent of prediction may be related to the fact that few of the tools available in technical colleges in Akwa Ibom State are obsolete and often not utilized in the emerging electrical economy. In other words, inadequacy of the emerging electrical tools in colleges in Akwa Ibom State could be responsible for the very low extent contribution of this aspect of skill (COT) in graduates' employability. The reason is within the premise that availability of instructional facilities enhances students' interest to studies as well as promote retentions. The findings corroborate the position of the Makinde (2016), that revealed a very low availability and students' level of utilization of measuring instruments during practical lessons, which undermines their academic performance and employability.

The extent to which IWDSA predicts ETCG was low though significant. This point to for the importance of understanding the procedures and patterns of wiring diagram interpretation to the employability of the graduates. However, the low extent skill in this IWD could be as a result of inadequacy of functional instructional facilities that could be interpreted and put to use for effective acquisition of the skills by the graduates. The findings contradicted the results of the study done by Amadi *et al. (2022),* which revealed that students to a high extent acquired skill for interpretation of wiring drawing for installation, competence in mounting electrical machines at the required points among others are industrial installation work skills that enhanced electrical/electronic trade students' sustainable livelihood. These skills acquired mostly were competence in careful observation, development of winding diagram of electric machine and ability to remove burnt coils from electric machine. This

contradiction perhaps may be according to Makinde (2016) position that lack of facilities which were in some schools moderately available influences employability of the graduates.

The extent to which CJSSA predicts ETCG was high though significant. This may be because the students had accessed to the cables at will within and outside the school environment for practical sessions and learning. The CJSS aspect of electrical installation and maintenance work skills has valuable orientations that can drastically promote self-development and self-reliance which are core values of employability in the trade. The finding was variant of the study done by Moses *et al.* (2017), which revealed that the graduates of EIMW trade of technical colleges in North Eastern Nigeria moderately acquired skills in installation of MICC cables and slightly acquired skills in installation of ducks and trunking task clusters respectively. The implication is that technical college graduate in Akwa Ibom State are more employable may be due to the involvement of students in the practical classes using the available facilities in a more serene and peaceful learning environment as compared to what is obtained in the North-east geopolitical zone of the Nation.

The extent to which FDSA predicts ETCG is high and significant. This may be built on the premise that fault detection requires application of simple tools which are readily available and accessible for used by the students coupled with the fact that its greater parts involved theoretical teaching as compared to practical. This implies that availability and accessibility of the students to instructional facilities has the tendency of promoting the academic achievement of students as well as enhancing their retention for employability in the trade. The finding aligned with the inference drawn by Moses (2017) that EIM graduates exhibited high level of job performance in three task clusters namely, fault detection, tools and equipment utilization.

The extent to which FRSA predicts ETCG was very low though significant. The implication is that although graduates of technical colleges in Akwa Ibom State were not really skilled in the aspect of fault rectification skill which is very essentials for the acquisition of the valuable skills in EIMW, the extent of FRS acquired were essential in the enhancement of their employability status. The very low extent of prediction may be related to the fact that few of the machines available in technical colleges in Akwa Ibom State are obsolete and often not utilized in the emerging electrical facilities and equipment world. In other words, inadequacy of the emerging electrical facilities and equipment for practical teaching in colleges in Akwa Ibom State could be responsible for the very low extent contribution of this aspect of skill (FRS) in graduates' employability. The reason is within the premise that availability of instructional facilities enhances students' interest to studies as well as promote retentions which are the cardinal values in graduates' employability. The findings corroborate the position of the Moses (2017) that EIM graduates exhibited low level of job performance in three task clusters namely, fault rectification, as well as tools and equipment utilization.

The extent to which IEESA predicts ETCG was very low though significant. The implication is that although graduates of technical colleges in Akwa Ibom State were not really skilled in the aspect of installation of electrical equipment skill (IEES) which is very essentials

for the acquisition of the valuable skills in EIMW, the extent of IEES acquired were essential in the enhancement of their employability status. The very low extent of prediction may be related to the fact that few of the machines and other electrical equipment available in technical colleges in Akwa Ibom State are obsolete and often not utilized in the emerging electrical facilities and equipment world. The finding of this study is supported by Moses (2017) results that EIM graduates exhibited low level of job performance in three task clusters namely, fault detection, tools and equipment utilization.

Conclusion

The electrical Installation maintenance work (EIMW) has been shown to be a trade that has the potency to inculcate functional and lifelong skills to technical college graduates to enhance their employability, makes them self-reliance, and promote further societal development. However, it has been shown that the optimization in the actualization of these established goals of EIMW is a function of adequately equipped workshops and facility stores. Arising from this perspective, the study's results has shown that of the nine aspects of EIMW, two have met the expectation to a very extent (work safety, and winding electrical machine skills); two readily attempt to meet the expectation of equality graduates' employability (cable joint/soldering, and facility detection skills); while five aspect of the EIMW skills (installation of electrical machine skills, interpretation of wire diagram skill; competence with tools; fault rectification skill, and installation of electrical equipment skills) were not meeting the average expectation. It is therefore denoting to states that the extent of graduates' employability depends on the states of adequacy in the availability of required equipment and facilities for technical study and learning.

This study serves as a critical tool that enhances the enlightenment of the researcher and the stakeholders in technical educational sector on the requirement for achieving proficiency in EIMW skills for graduate' employability. Nevertheless, the extent of variability of these variables in predicting employability of technical college graduates were highlighted, thus, providing blueprint to managers and planners of technical colleges in Akwa Ibom State to utilise in designing for effectiveness of EIMW and it skills sets that could enhance employability of graduates of technical colleges. Similarly, the findings of the study generated detailed fact on what factors are influenced by the state of these variables currently in the technical colleges, why the factors and how to cushion and correct the anomaly to make the technical colleges worthwhile in delivering expect results as designed by the Government. These findings will assist government in promulgating functional programmes and budgeting funds that could work collaboratively towards actualisation of the technical college's goals in Akwa Ibom State.

Recommendations

In light of the conclusion drawn from the findings of the study, the following were recommended to Akwa Ibom State Government (in particular) that if the technical graduates employability must be optimized:

i. Akwa Ibom State Government and corporate organisations/individuals should provide the technical colleges with adequate and functional facilities (electrical installation and maintenance work equipment and facilities) to assist in creating platforms for students' practical experience.

ii. State Government should ensure that technical colleges teachers are routinely trained on the emerging improvisation innovations and techniques for easy fabrication of instructional facilities when needs arises. This will close the gap of the inadequacy or unavailability of such facility or equipment as well as assists in overcoming the possibility of missing out in a given concept in the electrical installation and maintenance work trade.

iii. Technical colleges management and the teachers should carryout routine appraisal on the students' competence with tools, work safety, and other aspect of the trade. This will enhance the activeness of the students on the trade and in turn, improve their acquisition of employable skills on the trade.

iv. The management of technical colleges should t a large extent discourage application of much of the lecture method of instructional transfer but rather adopt mostly the problem-guided instructional strategy. This will promote students' active participation in practical aspect of the trade, and subsequently enhance their employability.

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